

RE-POWERING JHARKHAND:

AN ASSESSMENT OF THE SOLAR ROOFTOP POTENTIAL OF RANCHI AND JAMSHEDPUR



PREPARED BY

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BACKGROUND

Jharkhand is one of the richest mineral zones in the world. The state boasts of 40% and 29% of India's mineral and coal reserves respectively. Yet, with a coal resource of about 82,439.52 MT (1), Jharkhand lags in terms of overall development since its formation in 2000. However, for the past 5 years, Jharkhand has been witnessing tremendous development at a very steady pace. The reason behind this can be attributed to a stable and progressive governance. With a Gross State Domestic Product (GSDP) of about Rs 2.79 trillion (US\$ 43.36 billion) in 2017-18, Jharkhand stood second in terms of GSDP growth rate at 10.22% between 2011-12 and 2017-18. The state has attracted Foreign Direct Investment (FDI) equity inflows worth US\$ 113 million during the period April 2000 to June 2017 according to the data released by Department of Industrial Policy and Promotion (DIPP) (2). Recently, Jharkhand also secured the fourth position among all the states in terms of 'Ease of Doing Business'. This economic growth in the state is driven by the strong performance of industrial sectors such as mining, tourism and pharmaceuticals.

POWER SCENARIO

As of June 2018, Jharkhand had a total installed power generation capacity of 1764.46 MW, comprising 755.67 MW under private utilities, 554.05 MW under state sector and 454.74 MW under central utilities. Backed by large coal reserves, 1543.74 MW of the total installed power generation capacity in the state was contributed by coal-based thermal power plants. Power generation in the state during April 2018 reached 1,148.62 MW. The per capita electricity consumption in the state was recorded to be 552 kWh against the national average of 1,010 kWh during 2015-16. The state's renewable energy share in the energy mix, 31.1 MW (3), is almost negligible. According to MNRE's annual report 2017-18, Jharkhand has a solar energy potential of 18.18 GW. Jharkhand Solar Policy 2015 set a target of 2,650 MW to be installed by 2020. Halfway through 2018, reaching even close to this target seems difficult. The state has also formulated and notified a net metering policy. Under this policy, 498 Government buildings have installed grid-connected rooftop systems so far (4).

1 <https://www.ibef.org/pages/37832>

2 <https://www.ibef.org/states/jharkhand-presentation>

3 As per RTI dated 11.6.2018

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THE SOLAR ROOFTOP REVOLUTION

With reference to the urban energy crisis, solar rooftop projects are the game changers for achieving the state's target of 500 MW by 2020. Solar rooftop projects are a boon to tier-2 cities that are not only consistently suffering from a major energy crisis but have also been battling with deteriorating air quality.

Ranchi, the capital, and Jamshedpur, the nerve of the economy, are the two most populated cities of the state, followed by Bokaro and Dhanbad. Ranchi, being the capital, has been witnessing sound economic and infrastructural development. The Master Plan 2027 published by the State Government suggests an expansion of both the cities by almost 50 percent which directly points to the rapid urbanization and development in these cities. CEED's study on the solar rooftop potential assessment of Ranchi and Jamshedpur is a sincere attempt to understand and assess the true potential for solar rooftop projects in the urban landscape of Jharkhand with focus on these two cities. The aim of this study is to help the State Government to prepare an effective roadmap for efficient solar rooftop implementation in these cities. This will help in meeting not only their rising energy demand but also the target set under Jharkhand Solar Policy 2015.

To explore the elements of the report and to further discuss the implementation guidelines for the policy, the Centre for Environment and Energy Development (CEED), in collaboration with the Central University of Jharkhand (CUJ) and the Jharkhand Renewable Energy Development Agency (JREDA) is organising a conference 'RE-Powering Jharkhand' on 10th August, 2018 at Hotel Chanakya BNR, Ranchi, Jharkhand. This conference is the first ever event dedicated to solar rooftop in the state of Jharkhand and will aim to create a new solar pathway for this state.

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ABOUT CEED

Centre for Environment and Energy Development (CEED) is a solution-driven non-profit organization that works towards creating inspiring solutions to maintain a healthy, rich and diverse environment. CEED is dedicated to finding solutions for climate and energy, hazardous free future and for clean and safe water.

The idea of CEED was conceived by a group of young professionals with a vast amount of experience in the field of environment. CEED was registered in November 2012 as a non-profit organization under section 25, Companies Act, 1956.

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